



LODI CITY COUNCIL

Carnegie Forum
305 West Pine Street, Lodi

"SHIRTSLEEVE" SESSION

Date: July 9, 2019

Time: 7:00 a.m.

*and via conference call:

1311 Midvale Road
Lodi, CA 95240

For information regarding this Agenda please contact:

Jennifer M. Ferraiolo

City Clerk

Telephone: (209) 333-6702

Informal Informational Meeting

A. Roll Call by City Clerk

B. Topic(s)

B-1 Receive Information Regarding 200-Year Flood Risk Assessment (PW)

B-2 Receive Information Regarding Riverbank Stabilization Project and Associated Tree Removals (PW)

C. Comments by Public on Non-Agenda Items

D. Adjournment

Pursuant to Section 54954.2(a) of the Government Code of the State of California, this agenda was posted at least 72 hours in advance of the scheduled meeting at a public place freely accessible to the public 24 hours a day.

Jennifer M. Ferraiolo
City Clerk

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CITY OF LODI COUNCIL COMMUNICATION

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AGENDA TITLE: Receive Information Regarding the 200–Year Flood Risk Assessment

MEETING DATE: July 9, 2019 (Shirtsleeve Session)

PREPARED BY: Public Works Director

RECOMMENDED ACTION: Receive information regarding the 200–Year Flood Risk Assessment.

BACKGROUND INFORMATION: California enacted Senate Bill (SB) 5 in 2007 titled “Central Valley Flood Protection Act of 2008.” SB 5 defines “urban level of flood protection” as the “level of protection that is necessary to withstand flooding that has a 1-in-200 chance of occurring in any given year, using criteria consistent with, or developed by, the California Department of Water Resources.” The bill is intended to strengthen flood management within the Sacramento-San Joaquin Valley region.

The civil engineering firm of Kjeldsen, Sinnock & Neudeck, Inc. has completed a study to collect existing flood and topographic data, and to perform hydraulic and hydrologic analysis of the Mokelumne River and the City of Lodi in order to determine the 200-year flood protection boundary, and to develop the 200-year flood protection map. The map will be used by the City to establish findings for new developments relating to the 200-year flood protection level.

The study also determined that isolated areas along Lodi Lake that could easily be improved to even further minimize 200-year flood risk exposure for certain areas within the City that were constructed prior to July 2016.

Council will receive a presentation from Staff outlining the background and compliance requirements for SB 5, a review of the 200-Year Floodplain Study, and information regarding the next steps needed toward compliance.

FISCAL IMPACT: Not applicable.

FUNDING AVAILABLE: Not applicable.

Charles E. Swimley, Jr.
Public Works Director

CES/CES/tdb

APPROVED: _____
Stephen Schwabauer, City Manager

The City of Lodi Public Works



200-Year Flood
Risk Assessment
Council Presentation
July 9, 2019

Overview

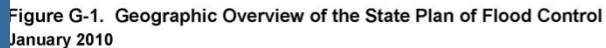


- California Senate Bill 5 (SB 5)
 - Background Information
 - Key Points
 - Timelines
- Lodi's 200-Year Floodplain Study
 - Process
 - Results
- City Options
- The Next Step

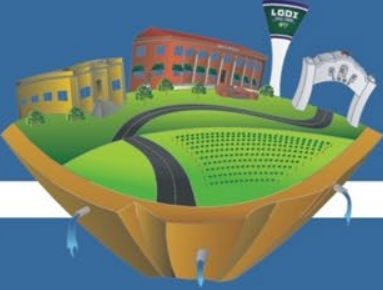


SB 5 Background Information

- 2005 - Hurricane Katrina
 - CA legislators to strengthen the flood protection programs
- 2007 - Passed CA Senate Bill 5
 - Created specific flood risk management requirements
 - Strengthened the relationship between flood management and local land use decision making
- 2012 - Amend. SB 5 (SB 1278 and AB 1965)
 - Extended compliance timelines
 - Directed Department of Water Resources (DWR) to prepare 200-year floodplain maps for urban areas protected by State Plan of Flood Control (SPFC) facilities
 - Required non-SPFC urban areas (Lodi) to prepare their own 200-year floodplain maps

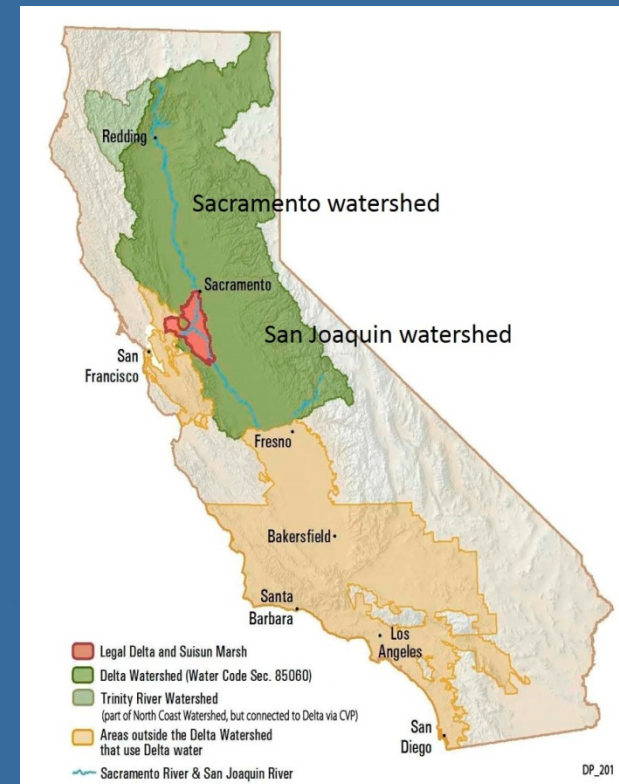
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SB 5 Key Points



- Sacramento-San Joaquin Valley (Urban Areas)
- “Urban Level of Flood Protection” findings prior to certain land use approval
 - Level necessary to withstand flooding that has a 0.5% chance (1 in 200) of occurring each year
- “Withstand” < 3’ flood depth
- Does not analyze local drainage system

Note: Different from Federal Flood Zones (FEMA), 1% chance (1 in 100) of occurring each year



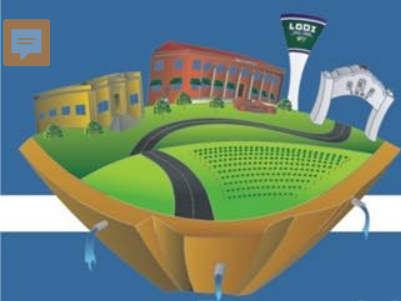
SB 5 Key Points



SB 5 Compliance Findings Required Prior to:

1. Agency entering into a development agreement on a property in the flood hazard zone;
2. Approving a discretionary permit or entitlement for construction of a new residence in the flood hazard zone; or
3. Approving a Tentative Map or Parcel Map for a subdivision in the flood hazard zone.

Note: SB 5 requirements are not applicable to remodel / reconstruction of an existing dwelling unit



SB 5 Timelines

Deadlines

- July 2, 2015 - Amend General Plan
- July 2, 2016 - Amend Zoning Ordinance

Milestones

- 2015 - Staff believed the City was outside the 200-year flood risk (based on the FEMA 500-year flood zone designation)
- 2017 - Staff revisited the issue and concluded that Lodi actually falls between the 100-year to 500-year flood zones
 - 200-Year Mapping Required
- Dec, 2017 - City hires Kjeldsen, Sinnock & Neudeck, Inc. (KSN) for 200-Year Floodplain Study
 - Also contracted Civil Engineering Solutions for independent review (required by SB 5)
- Dec, 2018 - Floodplain Study and Mapping Completed



200-Year Floodplain Study

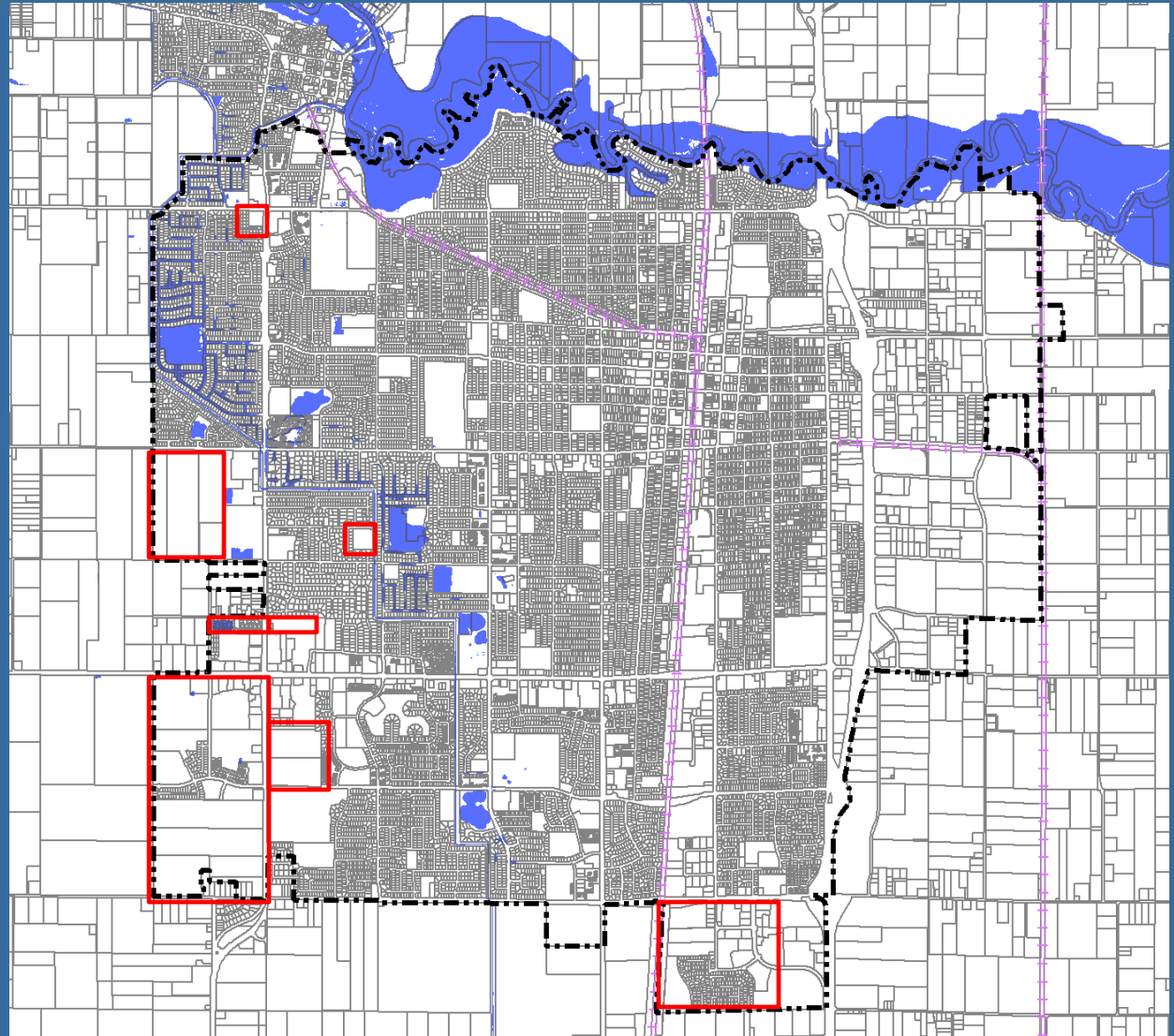
- Mapping Process
 - KSN built a stormwater model to simulate the runoff for the entire Mokelumne River tributary area
 - Calibrated the model with known storm event data
 - Built a separate 3D surface of the City
 - Ran the 200-year stormwater model with the 3D surface
 - Mapped the flood water depths on the 3D surface
 - Identified critical locations where floodwater enters the City



200-Year Floodplain Study

Results

- Color Map
- WID Canal
- River Low Points
 - Mills & Turner
 - WID Fish Screens
- Minimal Areas $> 3'$
(SB 5 Restriction)
- Developments Since 2015 $< 3'$
- 2010 GP Areas $< 3'$





200-Year Flood Plain Study

City Options

- Set 200-Year Flood Protection Standards:

- ➡ ○ Allow up to 3' of standing water (SB 5 standard maximum)
- Be more restrictive (i.e. no standing water, or up to 1' or 2')

- Requirements when Not Met:

- ➡ ○ Require to raise building floor to 200-Year Flood Elevation
- Require a height above the 200-Year Flood Elevation (i.e. 6" or 12")

- Projects to Provide Additional Flood Protection

- ➡ ○ Wall at Mills & Turner

- Staff Recommendation:

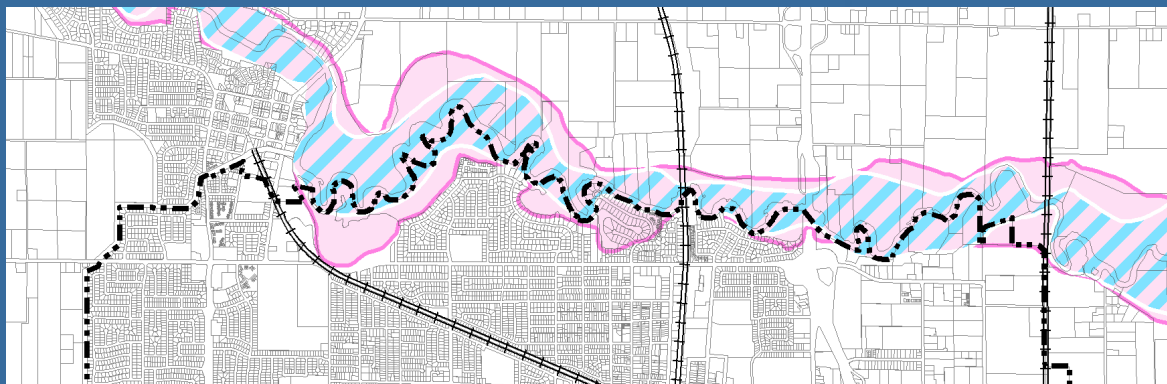
- Standards to meet minimum SB 5 Compliance
 - Already FEMA compliant
 - Minimize burden on citizens and developers
- Project(s) for additional protection



200-Year Flood Plain Study

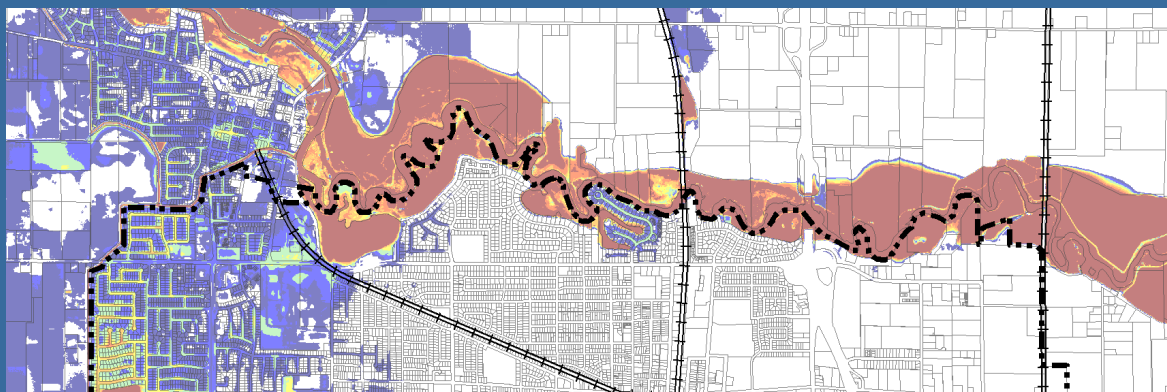
Requirements in FEMA & 200-Year Flood Areas

- Current LMC (15.60.180.C) requires development in FEMA Flood Zones to be 18" above the 100-Year Flood Elevation.
- Revise to the greater of 200-Year or FEMA Requirements.



FEMA Flood Zones

- AE
- AE (FLOODWAY)



200-Year Flood Depths

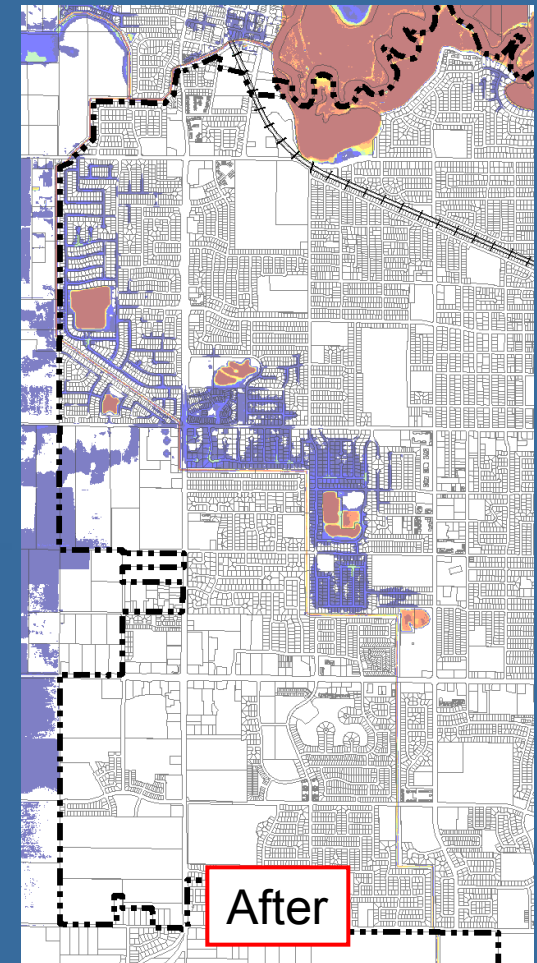
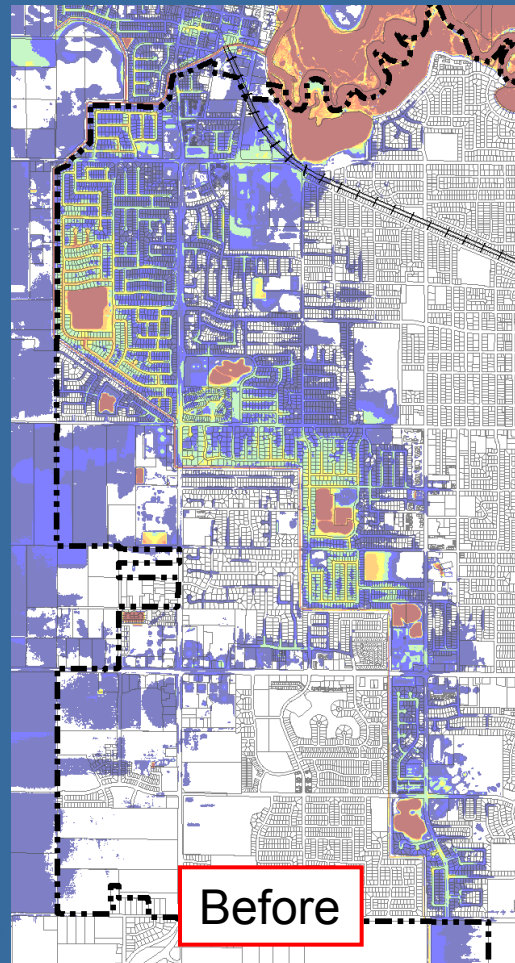
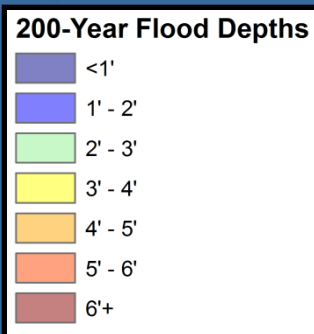
- <1'
- 1' - 2'
- 2' - 3'
- 3' - 4'
- 4' - 5'
- 5' - 6'
- 6'+



200-Year Flood Plain Study

Project to Provide Additional Protection

- Turner & Mills Wall
 - Same as City's current Emergency Plan
 - More Permanent & Structurally Sound
 - Greatly Reduces Flood Depths
 - No Impact on SB 5 Compliance





200-Year Flood Plain Study

Next Step

•Amendments:

- General Plan (Safety Element)
- Zoning Ordinance Amendment
- Lodi Municipal Code (Flood Management)

•Staff Recommendations

- Minimum SB 5 Requirements:
 - Allowing up to 3' of standing water
 - If over 3', require buildings to be raised up to 200-Year Flood elevation
 - Project to construct a wall at Turner & Mills





Questions?



CITY OF LODI COUNCIL COMMUNICATION

TM

AGENDA TITLE: Receive Information Regarding the Riverbank Stabilization Project and Associated Tree Removals

MEETING DATE: July 9, 2019 (Shirtsleeve Session)

PREPARED BY: Public Works Director

RECOMMENDED ACTION: Receive information regarding the Riverbank Stabilization Project and associated tree removals.

BACKGROUND INFORMATION: In 2018 the City received a State grant to perform repair and restoration work along eroded portions of the Mokelumne River adjacent to Lodi Lake Park. The grant covers costs associated with engineering, permitting, and construction.

On December 19, 2018 Council authorized a Professional Services Agreement with Kjeldsen, Sinnock & Neudeck (KSN) to perform the permitting and design for the project. KSN (and their sub-consultant) has completed their site data collection, site assessment, biological assessment, and is in the process of preparing the design plan and permitting applications.

As part of the design, plan, and permitting approach, KSN is recommending to reestablish portions of the embankment with native plants and grass, and to stabilize the slope with rock. The design plan also identifies approximately 30 trees recommended for removal along the subject riverbank. The trees being recommended for removal are either already tipped over due to the eroded embankment, in poor structural health and are potentially hazardous, or are a non-native species. The project will include replanting native species of trees in addition to the new plants and grass.

Council will receive a presentation from Staff providing a general overview of the project, proposed levee cross-sections, and details regarding the recommended tree removals. Staff will return to Council at a later date to take actions such as approving plans and specifications and authorizing the advertisement for bids.

FISCAL IMPACT: Not applicable.

FUNDING AVAILABLE: Not applicable.

Charles E. Swimley, Jr.
Public Works Director

CES/SN/tdb

APPROVED: _____
Stephen Schwabauer, City Manager

The City of Lodi
Public Works



Lodi Lake Park
Riverbank Stabilization
Project & Associated
Tree Removal

Council Presentation
July 9, 2019

Location





Background Information

- Grant in State's FY 2018/19 Budget
 - Assemblyman Jim Cooper
 - State's Department of Parks and Recreation
 - \$1,000,000 Grant for Erosion Control at Lodi Lake Park (Mokelumne River)
 - July 1, 2018 - June 30, 2021
- December 2018 Hired Kjeldsen, Sinnock & Neudeck (KSN) for Design & Permitting
 - Proposed Design / Permit includes
 - Rock Slope Protection (Rip-Rap)
 - Plant & Grass Reestablishment
 - Tree Removal & Replanting



Project Overview

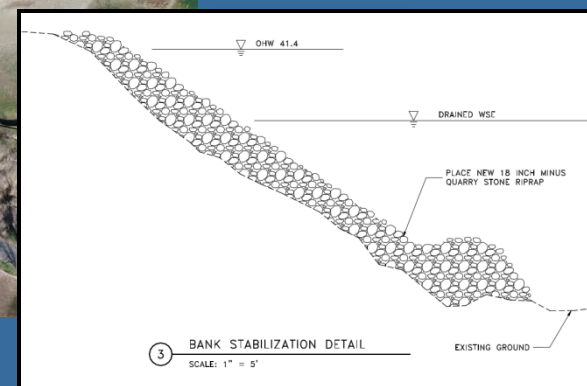
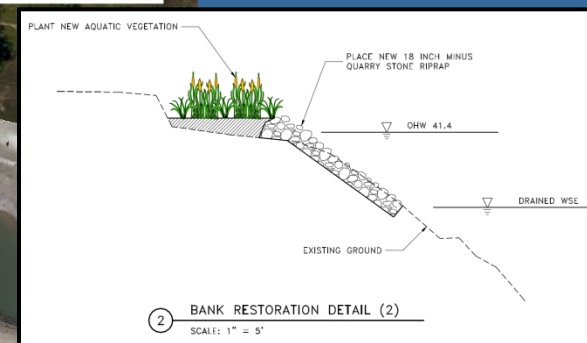
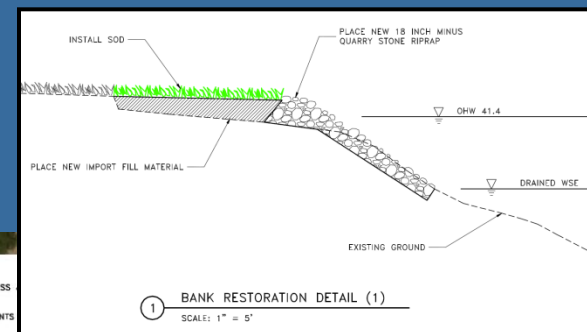
- Existing Condition Assessment
 - Erosion Impacted Locations
 - Existing River Cross-Sections
 - Tree Assessment





Project Overview

- Design
 - Proposed Design / Cross-Sections



Project Overview



- Permitting

- US Army Corps. of Engineers
 - Proposing: Nationwide Permit 27 “Aquatic Habitat Restoration, Establishment, and Enhancement Activities”
 - Removal of Old Broken Concrete
 - Removal of Non-Native Trees
- State Regional Board
- State Department of Fish and Wildlife





Tree Assessment





Tree Assessment





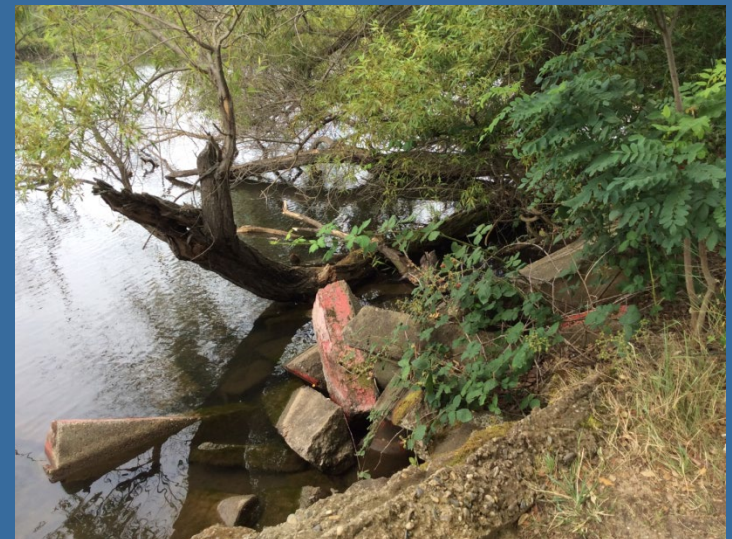
Tree Assessment



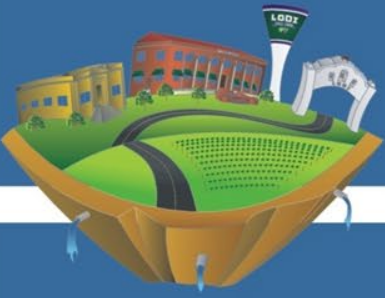


Tree Assessment

- Removal ~ 30 Trees
 - Notice for Dedicated Trees
- Primarily in Eroded Bank
- Included Arborist Review
- Will Replant Native Trees



Next Step



Next Step

- Finalize Design & Permit Approach
- Submit Permit Applications
- Complete Plans & Specifications
- Bid & Construct Improvements



Questions?